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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/738,456	12/17/2003	Bertrand Guichard	E-1-A	9573

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EXAMINER

FIGUEROA, JOHN J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/738,456

Applicant(s)

GUICHARD ET AL.

Examiner

John J. Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: <u>01/26/2006</u> |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/13/2004</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, drawn to a water-based drilling mud, classified in class 507, subclass 117+.
 - II. Claims 10-17, drawn to a process for preparing an oil soluble polymer fluid loss control agent, classified in class 516, subclass 28.
 - III. Claims 18-20, drawn to a method of lubricating a drilling bit, classified in class 175, subclass 65+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)).

In the instant case, the oil-soluble polymer fluid loss control agent can be formed by providing the hydrocarbon oil, adding an emulsifier to form a mixture, adding and dissolving monomers into the mixture, adding a free radical initiator and agitating until the monomer phase is emulsified within the hydrocarbon oil. The reaction is continued until conversion of the monomers to an oil-soluble polymer is complete and a polymeric latex/gel is obtained. The polymer can be separated from the latex, or added

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as a gel, to the other components of the drilling fluid to form the resultant drilling mud.

(See, e.g., col. 2, lines 51-67 of USPN 3,284,393 to Vanderhoff et al.)

3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)).

In the instant case, the water-based drilling mud product recited in claim 1 requires an aqueous phase, pH controllers, viscosifiers, salts, emulsifiers, weighting agents and clay in addition to an oil soluble polymer in the form of a gel. The process of using the drilling mud composition to lubricate a drilling bit can be practiced with any water-based drilling mud having an oil-soluble polymeric fluid loss reducer in the form of a gel, such as a drilling fluid that comprises a hydrocarbon-based gel containing a water-absorbent polymer, wherein the gel is formed by crosslinking a phosphate ester and an aluminum compound. (See, e.g., col. 6, line 26 to col. 7, line 13 of USPN 5,086,841 to Reid et al.)

4. Inventions II and III are, respectively, a process of making an oil soluble polymer fluid loss control agent and a process of lubricating a drilling bit. The method of lubricating a drilling bit as claimed can be practiced with a materially different product formed from the process as discussed above in paragraph #3 (e.g., the aforementioned drilling fluids disclosed in Reid). Thus, these inventions are unrelated.

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5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mr. Alvin T. Rockhill on January 20, 2006 a provisional election was made with traverse to prosecute the invention of Group II, claims 10-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-9 and 18-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

8. The use of trademarks PLIOLITE DF01®, DF02®, DF03®, VTACH®, VT® and ULTRA 200®; PLIOWAY®, PLIOFLEX®, PLEX®, RADIAGREEN®, DISPONIL FES®, CPR 7676® and 7755; KRATON® and XPR036® have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent

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their use in any manner that might adversely affect their validity as trademarks. For example, a person of ordinary skill in the art cannot determine from the specification the differences between the compositions of the various PLIOLITE® polymers or the composition of the RADIAGREEN® solvent.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 14-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims recite the phrase "synthetic hydrocarbon". The specification does not provide sufficient guidance to a person of ordinary skill in the art as to which solvents are encompassed by the phrase "synthetic hydrocarbon". The only hydrocarbon oil used in the experimental section is RADIAGREEN® but there is no generic description of the solvent from which a person skilled in the art can use as a guide to determine the exact composition of RADIAGREEN®. One skilled in the art would not be able to determine which "synthetic hydrocarbon" is an appropriate solvent in which to perform the recited process and formed the claimed agent without undue experimentation.

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Thus, the specification does not provide adequate enablement to a person skilled in the art to practice the claimed invention.

Claim Rejections - 35 USC § 102

11. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 10-16 are rejected under 35 U.S.C. 102(b) as anticipated by United States Patent No. 6,051,562 to Chamberlain et al. (hereinafter 'Chamberlain').

Chamberlain discloses an oil-in-water emulsion drilling fluid having an aqueous phase and a discontinuous oil phase containing a hydrophobic liquid that is immiscible with the aqueous phase, wherein the oil phase is stabilized by an oil-solubilizing material, such as a polymer (oil-soluble stabilizer). (Abstract; col. 3, lines 25-40) The resultant oil phase product is an emulsion, such as a microemulsion, and includes dissolved or dispersed material in addition to the oil-soluble stabilizer but preferably does not include an emulsified water phase. (Col. 3, lines 41-60)

Chamberlain further discloses that among the materials that can be used for the oil-soluble stabilizer are conventional oil-soluble surfactants, such as sorbitan monooleate (sorbitan fatty acid ester), and oil-soluble stabilizing polymers dissolved or

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dispersed in the hydrophobic liquid. (Col. 5, lines 1-7; col. 10, lines 60-64) The oil phase can include an oil-soluble active ingredient, or other additives, dissolved in an organic solvent, such as a hydrocarbon solvent (including "synthetic" hydrocarbons) or other hydrophobic solvent, liquid diester solvents (including aliphatic ester solvents), cyclohexanone or dibutyl phthalate. (Col. 10, lines 36-50 and 60-64; col. 11, lines 46-51) However, if the oil phase includes both, an oil-soluble surfactant and an oil-soluble stabilizing polymer, the surfactant is generally present in less than half the amount of the oil-soluble polymer. (Col. 11, lines 8-17)

Moreover, Chamberlain discloses that the emulsion can be made in any conventional form by combining the various components in any convenient manner. (Col. 10, lines 10-12) The preferred way disclosed is by preforming the aqueous and oil phase separately by stirring until forming a continuous phase using a suitable homogenizer, such as a SILVERSON® mixer, or a rapid agitator. (Col. 10, lines 12-18)

In Example 10, Chamberlain discloses forming an emulsified cream by a process including dissolve the ingredients into the solvent by heat, adding water to the heated mixture, and rapidly stirring an oil-phase composition of a mixture containing an oil-soluble polymer ('Polymer A'), stearic acid, cetyl alcohol (conventional emulsifier) and mineral oil (liquid petroleum hydrocarbon derivative solvent). (Col. 17, lines 10-33)

Alternatively, in Examples 1, 4-6 and 9, Chamberlain uses SOLVESSO™100, a "synthetic" aromatic hydrocarbon solvent from EXXON-MOBIL® composed mainly of dialkyl and trialkyl benzenes, as the solvent to form the oil-phase mixture; whereas in

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Example 11, glyceryl tricaprato/caprylate (a "synthetic" aliphatic fatty acid ester) was the organic solvent used for the oil-soluble composition.

Thus, the claims are anticipated by Chamberlain.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chamberlain in view of United States Patent Number 3,002,923 to Barker et al. (hereinafter 'Barker').

Chamberlain was discussed above. Chamberlain does not specifically disclose the emulsifier to be an alkyl ether sulfate or a fatty acid amine.

Barker teaches the use of a fatty acid amide of glucamine or esters thereof as the oil-soluble emulsifier component of an oil-based emulsion. (Col. 2, lines 3-12 and 27-30; col. 7, lines 43-59) Barker further teaches that this fatty acid amide of glucamine has outstanding emulsifying ability because it provides extreme stability to a fluid, over a wide range of temperature, when it is present in an oil-based emulsion fluid (such as in a drilling fluid). (Col. 1, lines 9-13; Col. 2, lines 13-17)

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time that the invention was made, to use Barker's fatty acid amide of glucamine as

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the oil-soluble emulsifier in Chamberlain's oil-phase mixture. One skilled in the art would have been motivated to do so in order to attain a resultant emulsified mixture/cream that is far more stable because it can withstand decomposition over a wide range of temperatures as taught by Barker.

Thus, the claims are unpatentable over Chamberlain and Barker.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference designated as "X" in the European Search Report (USPN 3,528,914 to Darley) was not cited in this office action because it does not specifically disclose the process recited in the instant claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Monday-Thursday & alt. Fri from 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJF/RG



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